



Strategies for Building Energy Efficiency

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Message from the Guest Editors

Dear Colleagues,

The past years have seen a progressive urbanization and building upgrading process, along with the improvements in and popularity of energy-intensive appliances via advanced information and communications technologies. According to the 2022 IEA report, building-associated energy consumption and CO₂ account for approximately 33% and 15% of the world's outputs. An important roadmap consensus of hitting "CO₂ peaking and neutrality" is to address building energy issues. Therefore, new generation strategies for building energy efficiency are becoming a pressing need.

This Special Issue intends to act as a forum for the dissemination of the latest research and developments in strategies for building energy in the context of "CO₂ peaking and neutrality".

- building microgrid
- building power/load forecasting
- building energy consumption
- demand response strategies
- transactive energy control
- building management strategies
- economic optimization strategies
- urban distribution systems
- building HVAC
- cyber-physical system





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Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

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